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EXAMINER

MCDONOUGH, JAMES E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/692,827	Applicant(s) ZHAO ET AL.	
	Examiner JAMES E. MCDONOUGH	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41 and 43-66 is/are pending in the application.
- 4a) Of the above claim(s) 41, 57-63 and 66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-56, 64 and 65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/7/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Newly submitted claims 57-63 and 66 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the originally elected invention is directed towards a catalyst system, the new claims are directed towards a method.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 57-63 and 66 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocovsky et al. J. Am. Chem. Soc. 1999, 121, 7714-7715, in view of Buchwald et al. (USP 6,307,087) in further view of Baardman et al. (USP 5,658,982), as evidenced by McFarland et al. (US 2002/0197731) and Peters et al. (US 2003/0032808).

Regarding claims 43, 47 and 49

Kocovsky teaches a catalyst composition (scheme 1, formula 3) that would appear to read directly on the claims, if adjacent R's are allowed to be joined to form a saturated or unsaturated ring, as for the R' substituents for R³ and R⁴ substituents. Although the claims does not state that this is allowable, it also does not appear to prohibit it. However, because Buchwald shows many examples of binaphthyl and biphenyl rings containing one nitrogen donor and one phosphorous donor, or with two phosphorous donors, as being functionally equivalent ligands on palladium catalyst (see formulas 1-8 and column 17, line 50 to column 18, line 15), it would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Kocovsky, by substituting biphenyl for binaphthyl, with a reasonable expectation of success, as suggested by Buchwald.

With respect to the activity of the catalyst, this is an intended use limitation, and is not seen to further limit the composition itself.

Although, Kocovsky and Buchwald are silent as to the use of an activator, Kocovsky and Buchwald do teach the rest of the limitations of the claims. However, because Baardman teaches addition of tris(perfluorophenyl)borane greatly increases the rate of polymerization with catalyst (column 8, lines 42-46), and it is well known to use an activator for polymerization catalysis, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention,

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to modify the teachings of Kocovsky and Buchwald, by including an activator with the catalyst if it is desired to use the catalyst for polymerization, with a reasonable expectation of success, as suggested by Baardman.

Although, the reference are silent as to whether the catalyst could be used for polymerization the skilled artisan would readily appreciate that catalyst can be used to catalyze more than one type of reaction and this is demonstrated for catalyst of nickel and palladium as evidenced by McFarland et al. (US 2002/0197731) (paragraph 0054) and Peters et al. (US 2003/0032808) (paragraph 0116)

Regarding claim 44

Kocovsky teaches the use of phenyl (scheme 1).

Regarding claim 45

Kocovsky teaches the use of methyl for R1 and R2 and teaches phenyl for R3 and R4 (scheme 1).

Regarding claim 46

This only further limits the claim when y is not equal to 0.

Regarding claim 48

Kocovsky teaches the use of chloride (scheme 1).

Claims 50-55, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocovsky et al. J. Am. Chem. Soc. 1999, 121, 7714-7715 in view of Buchwald et al. (6,307,087) in further view of Baardman et al. (USP 5,658,982) as evidenced by McFarland et al. (US

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2002/0197731) and Peters et al. (US 2003/0032808), as applied to claim 43 above, and in further view of Mecking (USP 6,262,196).

Regarding claims 50 and 51

Although, Baardman does not teach the use of a myriad of activators, Baardman does teach the use of activators. However, because Mecking teaches that for polymerization catalyst as Lewis acid activators such as tris(pentafluorophenyl)borane methylaluminoxane and alkyl aluminums are functionally equivalent, with particular preference given to aluminuoxanes (column 9, lines 20-36), it would have been prima facie obvious to one of ordinary skill in the art at the time of invention, to modify the teachings of Baardman, by substituting methylaluminoxane for the tris(pentafluorophenyl)borane, with a reasonable expectation of success, as suggested by Mecking.

Regarding claim 52

Mecking teaches the use of triethylaluminum (column 9, lines 20-36).

Regarding claim 53

Mecking teaches the use of dimethylanilinium[tetrakis(pentafluorophenyl)borate] (column 9, lines 20-36).

Regarding claim 54

Because, Buchwald teaches that these catalyst may be linked to a support (column 17, lines 1-5), Buchwald also teaches “in certain embodiments, it may be preferred to perform the catalyzed reaction in the solid phase with one of the reagents anchored to a solid support” (i.e. the catalyst may be anchored to a support) (column 35, lines 1-4), and “Furthermore one or more of the reactants can be immobilized or incorporated into a polymer (column 35, lines 43 and 44),

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and it is common in the field of catalyst to place the catalyst on a support to allow for easy recovery of the catalyst and easy separation of the reaction products, it would have been prima facie obvious to one of ordinary skill in the art, to modify the teachings of Kocovsky, by placing the catalyst on a polymer support, with a reasonable expectation of success, as suggest by Buchwald, and the expected benefit of being able to easily recover the catalyst and separate reaction products, while reducing the cost by being able to reuse the catalyst.

Regarding claims 55 and 65

If it is desired to use a catalyst for olefin polymerization, it would be obvious to include an olefin. It is further noted that ethylene is one of the most common olefins used for polymerization, if not the most common olefin.

Regarding claim 64

The use of a solvent is seen as an intended use and does not further limit the composition of the catalyst. However, Buchwald teaches that polymerization catalyst may be used with inert solvent such as in aprotic polar solvents (column 34, lines 51-65), therefore making it obvious to one of ordinary skill in the art at the time of invention to use an aprotic polar solvent, with a reasonable expectation of success, as suggested by Buchwald.

Claims 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kocovsky et al. J. Am. Chem. Soc. 1999, 121, 7714-7715 in view of Buchwald et al. (6,307,087) in further view of Baardman et al. USP 5,658,982), as evidenced by McFarland et al. (US 2002/0197731) and Peters et al. (US 2003/0032808), as applied to claim 43 above, and in further view of Mawson et al. (US 2002/0107342).

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Although, Kocovsky, Buchwald and Baardman are silent as to the use of two different catalyst, they do disclose the rest of the limitations of the claim. However, because Mawson teaches if a bimodal polymer product were desired one could mix one catalyst with an activator, and later adding a second catalyst, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention that if it was desired to form a polymer with a bimodal distribution, to modify the teachings of Kocovsky, Buchwald and Baardman, by using two catalyst, with a reasonable expectation of success, as suggested by Mawson, with the expected benefit of forming a polymer product with a bimodal distribution.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 43-56, 64 and 65 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-6 and 9-17 of copending

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Application No. 10/693,584. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the two applications disclose substantially the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicants argue against the 103 rejections over Sumi, in view of Baardman, in further view of Qian.

Applicants argue against the 103 rejection over Buchwald in view of Baardman in further view of Qian.

Applicants argue against the 103 rejection over Zhang in view of Baardman, in further view of Qian.

Although, these rejections are no longer present making most of these arguments moot. The examiner has responded to the arguments that would still apply.

Applicants argue that the examiner has long ignored the amendment to the preamble regarding the catalyst and that it is an olefin polymerization or oligomerization catalyst. This is not persuasive and as discussed in the interview the preamble does not further define the composition, as it is only seen as an intended use. Applicants are reminded that this was discussed during the interview, and the examiner has not ignored this limitation as alleged by applicants, but the examiner has not given it weight. If applicants are not happy with this action, they are kindly invited to schedule an interview where the examiner and the examiners

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supervisor can be present to further explain why this amendment to the preamble is given no patentable weight.

Applicants argue that the declaration of Jo Ann Marie Canich has not been given its due weight and point to paragraphs 5-6 of this declaration. This is not persuasive because these are mere opinions and allegations, and are not supported by any factual evidence, and applicants are reminded that opinions in declarations are given little if any weight, this was discussed earlier in the response to arguments section in the office action dated 8/18/2008, however it appears applicants have ignored the examiners comments.

Applicants argue that if the examiner wishes to contest the validity of statements made in this declaration, it is proper that he do more than offer mere Examiner argument or conclusory statements to do so-he must take official notice, cite published prior art contradicting this sworn testimony, or offer contradictory sworn testimony based on clear scientific reasoning (e.g., in the form of a declaration or affidavit), if he wishes to cast doubt over its validity to put the burden of proof back on applicants. This is not persuasive because the paragraphs 5-6 are only mere opinion evidence and do not offer proof or evidence that the author is correct.

However, in the spirit of trying to move prosecution forward the examiner submits that as evidence for the official notice that as evidenced by McFarland et al. (US 2002/0197731) it is taught "Once an array of catalyst is formed the screening methods of the present invention can be used to characterize the catalytic properties of various compounds by observing, for example, activity, lifetime and selectivity for a variety of catalytic transformations. For purposes of this invention, a catalyst is defined as any material that accelerates the rate of a chemical reaction and which is either not consumed during the reaction or which is consumed at a rate slower (on a

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molar basis) than the reaction that is being catalyzed. Examples of catalytic reactions/transformations include, but are not limited to, total oxidations..., selective oxidations..., reductions..., polymerization (e.g., ethylene copolymerizations), dimerization..., trimerization..., oligomerization..., decompositions..., hydrosilylation, carbonylations, hydrocyanation, hydroformylation, isomerization, metathesis..., carbon-hydrogen activation, cross coupling, Friedan-Crafts acylation and alkylation, hydration, and Diels-Alder reactions."

(paragraph 0054), which shows that it is known to examine a catalyst for more than one type of catalytic transformation. Further evidence of the examiner official notice is Peters et al. (US 2003/0032808), this reference shows that a amido ligated metal complex of nickel or palladium are expected to be useful in catalysis reactions such as hydroamination, olefin hydration, alkane oxidation, olefin epoxidation, dinitrogen activation, olefin polymerization/copolymerization/living polymerization, catalytic C-E bond formation (where E is C, N, O, S, Si, H and so forth), as well as Heck, Suzuki and Sonagoshira coupling reactions (paragraph 0116), clearly showing that it is expected of nickel and palladium catalyst to be able to function in a wide variety of catalytic transformations, contrary to applicants opinion that one of ordinary skill in the art would not be motivated to use a catalyst for one known use and attempt to use it for another, and have a reasonable expectation of success of the catalyst having more than one catalytic utility.

Applicants argue that the examiner incorrectly rejected the reference of Fox, but that the applicants are also allowed to cite references. It is true that applicants are also allowed to cite references, however the reference of Fox was not persuasive because the fact that it taught that the coordination to nitrogen is not necessarily needed for the catalyst, this does not motivate one

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to modify the references to remove the nitrogen donor, and the references teaches that this nitrogen donor can be used in the ligand, so it is not understood how it is supposed to show a teaching away or any other lack of motivation for combining the references, and the examiner is again taking note of this reference as the examiner did before, and it is still not persuasive. Further applicants are reminded that for a reference to teach away there must be some teaching or suggestion that the proposed combination will not work, the examiner can find no such teaching or suggestion, and applicants have failed to provide any.

Applicants argue against the reference of Baardman, and that Baardman does not teach the use of one nitrogen donor and one phosphorous donor, although, Baardman teaches the use of bisphosphinyl ligands and that other suitable ligands have two nitrogen atoms. This is not persuasive because it does not teach away from using one nitrogen and one phosphorous as alleged by applicants, but it is stated that Baardman was not used to show the use of one nitrogen and one phosphorous donor, and this is considered to be improper piece meal analysis of the references, by attacking the reference of Baardman individually, and not why it is not proper for combination. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue that “an examiner having a Ph.D. in inorganic catalyst chemistry, would not be one of ordinary skill in the art, for the purposes of this determination, and the Examiner in this case must limit himself to that which can be proven on the record and not that which his extensive experience and/or intuition in small molecule catalysis would suggest.” Although,

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believed to be outside the scope of the rejection, but for purposes of showing the fallacy of this statement I will divulge. This is not persuasive for at least the following:

1.) Catalysis and/or small molecule activation vs. polymerization in chemistry are considered to be separate (i.e. people actually study and receive Ph.D. and Ms. Degrees in polymer chemistry).

2.) To further clarify throughout the examiner's undergraduate degree he was only aware of and taught about condensation polymers (of which the majority was in undergraduate biology classes related to polysaccharides, proteins, and nucleic acids; also some in undergraduate organic chemistry) and addition polymers (undergraduate organic chemistry, very brief) (i.e., free-radical polymerization)

3.) During the examiners graduate degree (4 organic chemistry classes[physical organic, organic reactions, asymmetric organic and organic synthesis], 1 drug design class, 3 inorganic classes [coordination chemistry, organometallics and x-ray crystallography] and several physical chemistry classes) polymers were never discussed in the curriculum, other than that of dendrimers.

4.) The examiners Ph.D. dissertation title is "Thermodynamic and Kinetic Studies of Ligand Binding, Oxidative Addition and Atom/Group transfer in Group VI Metal Complexes", while metallocenes and other coordination compounds were extensively studied, nowhere in the entire dissertation is there a single catalytic reaction described as research, so if it is not understood if there was a misunderstanding, but the examiner is clearly not an expert on polymerization catalysis, and even arguing if it could be argued that the examiner is, this is only based on the examiners experiences at the USPTO over the course of less than three years

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working, and not from his academic studies. If applicants wish, the examiner would be glad to furnish a complete copy of his dissertation at applicant's request. During this research I never studied or examined any reactions of metal compounds with olefins to form polymers, whether they be metallocenes or Ziegler-Natta type catalyst, pi-bonding of olefins to metals as coordinate ligands was studied. Further the examiner was never introduced to Zeigler-Natta or metallocene polymerization until working for the USPTO.

5.) Metal catalyzed polymerization of olefins has been known for some time (i.e. 1954 Nobel prize in chemistry was for Ziegler-Natta catalyst).

6.) One of ordinary skill in the art would be responsible for knowing what was readily available in the art, which the examiner submits as it pertains to polymerization catalysis is beyond the examiners knowledge of chemistry. This bring to question, Who would be one of ordinary skill in the art of polymerization catalysis? Clearly it would not be an undergraduate, and while one possessing a Ph.D. in polymer chemistry might be beyond this level. It is the examiners opinion that it would be at least someone with a graduate degree or an undergraduate degree with several years in the field, who the examiner would expect would realize that some catalyst can be used for more than one reaction type, but this is irrelevant as the submitted secondary evidence above clearly shows that it was within the level of ordinary skill to comprehend that a catalyst could possibly be used for more than one reaction type.

7.) Where the examiner's extensive knowledge and intuition might come into hand are with regard to the reaction of the ligands of the reference with the metals compounds disclosed. Where applicants have argued including in the declaration that it was their opinion that the ligand would not bind to the metal as alleged by the examiner. Not only has the examiner

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submitted evidence that the ligands will bind with the metal in the manner described (see scheme 1 of Fox), which the examiner would gladly back up with a sworn affidavit as to his professional opinion of, but as of now applicants have failed to provide any persuasive evidence to rebut the examiner's position and that found in the prior art. It is further noted that the fact that in the reference of Fox only 10% of the compound is in the isomeric form as claimed in the instant invention does not in any way lead away from the fact that the reference clearly teaches that this ligand will bind with the metal in the manner suggested by the examiner, and that this reference discloses the basic catalyst structure. Further the examiner would be glad to provide more evidence, if this is not sufficient, that would have lead one of ordinary skill in the art at the time of invention to believe the same.

Applicants argue that Baardman teaches the copolymerization of olefins with carbon monoxide, which applicants have continuously maintained exhibits different reaction requirements than other olefin (co)polymerization. While this may be true, it is not persuasive because the above shows that one of ordinary skill in the art would appreciate that a catalyst can have uses for more than one type of catalysis. Further carbon monoxide and carbon dioxide are much harder to activate using metal compounds than olefins are (as evidenced by the vastly more common publications of polymerizations of olefins vs. that of copolymerization of carbon monoxide or carbon dioxide with olefins), and one skilled in the art would expect that a catalyst that can activate both an olefin and carbon monoxide towards polymerization, would also be useful for polymerizing/copolymerizing olefins, based on the arguments above. If applicants disagree that it is harder to activate carbon monoxide/dioxide than olefins they are kindly

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requested to submit evidence showing this to be the case or clear scientific reasoning as to why one of ordinary skill in the art would believe this to be the case.

Applicants further argue that inventor Canich has made of record a publication, which she has co-authored involving carbon-monoxide olefin copolymerizations, so the record might reflect not only her experience in that area but also her appreciation of why (co)polymerizations of olefins only, or olefins and non-polar monomers are different are different from what is disclosed in Baardman. This is not persuasive because while it is understood that copolymerizing olefins with carbon monoxide/dioxide is different than (co)polymerizing olefins alone.

Applicants still have failed to show any persuasive reasoning why one of ordinary skill in the art would believe that because the catalyst was used to copolymerize olefins and carbon monoxide/dioxide that the catalyst could not also be used to (co)polymerize olefins alone. Here it is noted that the inventor Canich with her vast knowledge and experience of both types of polymerization would not be one of ordinary skill in the art and able to make this decision, and further other than inventors Canich's opinion no evidence has been submitted to support this argument, while the examiner has provided secondary evidence to support his opinion that one of ordinary skill in the art would have found it obvious that a catalyst can possibly catalyze more than one type of reaction. It is also noted that it is expected that inventor Canich was aware of the references of Kocovsky and Fox, so what was the applicants motivation for using this type of metal compound, if the applicants believe in their opinion that one would not seek to use a metal catalyst for one type of transformation and attempt to use it for another type of catalytic transformation? What is it that makes applicants believe that one of ordinary skill in the art would not think this way? Applicants are reminded that opinion evidence is given little weight,

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and in this case the factual evidence of record outweighs and negates the opinion of inventor Canich.

Applicants argue that the examiner logic, which seems to be anything within the realm of catalysis is obvious to try. This is not persuasive as it is not the examiners opinion that anything within the realm of catalysis and polymerization would be obvious to try and that all other things flow obviously from therefrom. The examiner had based his rejection and arguments on what he felt was proper at the time and still feels is proper, however, based on applicants amendments to the claims, which raised new issues that required further search and/or consideration and an amendment to the rejections, and further based on the examiners better understanding of the claims at issue, new rejections have been substituted that eliminate the reliance on the official notice of the examiner, in an effort to simplify the issues and forward prosecution. Where the examiner still takes official notice that it would be obvious to modify the reference(s) evidence has been submitted to support these allegations by the examiner.

Applicants argue that the relatively high number of variables, as well as the unpredictability of the results obtained by modifying the variables, Applicants respectfully submits that the obviousness rejections cannot be maintained. While it is agreed that there are a high number of variables, whose manipulation can not always be predicted, this is not uncommon in chemistry in general and catalysis in specific, and it is believed by the examiner that the new rejections and the knowledge generally available to one of ordinary skill in the art, would lead one of ordinary skill in the art to find it obvious to try to use the catalyst for a purpose other than, which the reference itself describes, to find the amended claims obvious and believe there was a reasonable (although not certain) expectation of success for the reasons given above.

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Applicants argue that Baardman teach that the use of protic compounds can be advantageous for maintaining the polymerization rate at the initial level, and that while they may be useful for copolymerization of CO with olefins, they can poison certain olefins polymerizations. While this may be true one of ordinary skill in the art would understand this and recognize that a protic compound could be deleted if it poisoned the catalyst instead of improving it, further there is no requirement that a protic compound be used that the examiner can find, and none of the instant claims disallow its use.

Applicants argue that in the declaration it stated “for olefin polymerization or oligomerization, a protic diluent would be expected to act as a chain termination agent forming a saturated oligomer or polymer with a saturated end group (Emphasis added). While a chain termination agent may not be considered a “catalyst poison”, it certainly “poisons” the oligomerization or polymerization reaction from the standpoint of obtaining a desired product. This should be sufficient reasoning. Even if not, Applicant now has claims (63-64) which specifically recite an aprotic organic liquid, from which the disclosure of Baardman thus teaches away.”. This is not persuasive for at least the following reasons:

1.) This whole argument acknowledges that the catalyst could work but would not produce the polymers desired.

2.) The desired polymers are not claimed and the skilled artisan would appreciate that the catalyst of the instant invention could produce more than one polymer depending on the condition employed.

3.) If the skilled artisan would recognize that the protic compound would result in chain termination, would it not be obvious to not use a protic compound if it was desired to form higher molecular weight polymers.

4.) The claims do not exclude the use of a protic compound.

5.) Applicants are reminded that for a reference to teach away there must be some teaching or suggestion that the proposed combination will not work, the examiner can find no such teaching and the applicants have failed to provide any.

Applicants argue that informal websites or undated publications, such as wikipedia, which is not based on actual knowledge at the time of invention/filing, cannot satisfy to buttress an argument based on common sense or common knowledge. This is not persuasive because, while the examiner admits that wikipedia is not a proper source, it can be dated to see what was available at a given time, and the cited portion was scientifically correct and verifiable in any modern inorganic chemistry textbook, but was used for the applicants advantage to more precisely explain examiner's position in as concise a manner as possible, however, the new rejections do not rely on this, and so this argument is moot. However, for a more concise explanation of what the examiner had attempted to explain can be seen column 1, lines 15-30 of Buchwald, where it states "Transition metal catalyst complexes play important roles in many areas of chemistry, including the preparation of polymers and pharmaceuticals. The properties of these catalyst complexes are recognized to be influenced by both the characteristics of the metal and those of the ligands associated with the metal atom. For example,. Structural features of the ligands can influence reaction rate, regioselectivity, and stereoselectivity. Bulky ligands can be expected to slow reaction rate; electron withdrawing ligands, in coupling reactions, can be

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expected to slow oxidative addition to, and speed reductive elimination from, the metal center; and electron-rich ligands, in coupling reactions, conversely, can be expected to speed oxidative addition to, and slow reductive elimination from, the metal center” and this is why the examiner believes that it would have been obvious to substitute one abstractable ligand for another with a reasonable expectation of success, and a general understanding of the affect it would have had, and although it is given that this is not always predictable, the applicants have not submitted any evidence that the examiner considers to be persuasive, showing any unexpected results or criticality of the instant invention, or why the theory known in the art, which is not always correct, would be incorrect in this situation.

Applicants argue against the double patenting rejection.

Applicants argue that the examiner should withdraw the double patenting rejection from the base case and only apply a double patenting to the improvement invention. This is not persuasive because the reason for a double patenting rejection is not solely to show which invention is the base and which invention is the improvement, but is to establish common ownership of the inventions that are obvious variations of one another. The double patenting rejections will be withdrawn after one of the following: 1.) The filling of terminal disclaimers, 2.) Abandonment of one of the applications, or 3.) Amendments to the claims that make the separate inventions no longer obvious variants of one another.

Conclusion

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. MCDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793

JEM 5/7/2009